

APPLICANT(S): BARAK, Ilan et al.  
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### AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows:

1. (Currently Amended) A method comprising:  
  
    ~~providing determining, based on an adaptive function, to vary an amplitude of~~  
    an output signal by varying either a phase difference between first and second  
    outphased signals or an amplitude of the first and second outphasing signals ~~that are~~  
    shared by a phase lock loop and an automatic level control loop.
2. (Currently Amended) A method of claim 1, further comprising:  
  
    generating ~~an~~ the output signal according to the first and the second outphased  
    signals.
3. (Currently Amended) The method of claim [[ 2]] 1, further comprising:  
  
    controlling an instantaneous amplitude of the output signal by varying either  
    an amplitude ~~and varying [[a]]~~ or the phase difference ~~of~~ between the first and the  
    second outphased signals according to an amplitude error of the output signal; and  
  
    varying a phase of the first and the second outphased signals according to a  
    phase error signal of the output signal.
4. (Original) The method of claim 3, further comprising:  
  
    generating the amplitude error signal and the phase error signal according to  
    an input signal and the output signal;  
  
    generating a first control signal of the automatic level control loop according  
    to the amplitude error of the output signal; and  
  
    generating a second control signal of the automatic level control loop  
    determined, at least in part, by an adaptive function of the amplitude error signal.
5. (Original) The method of claim 4, further comprising:  
  
    varying the amplitudes of the first and the second outphased signals with a  
    first range of the amplitude error of the output signal; and

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varying the phase difference of the first and the second outphased signals with a second range of the amplitude error of the output signal.

6. (Original) The method of claim 5, further comprising:  
transmitting the output signal at an average power level which is substantially equivalent to a targeted power level.
7. (Original) The method of claim 6, further comprising:  
selecting the targeted power level from a first and a second power levels.
8. (Currently Amended) A method comprising:  
controlling an instantaneous amplitude of an output signal by varying, either a phase difference between first and second outphased signals and or an amplitude of the first and second outphased signals according to first and second control signals;  
and  
setting ~~[[a]]~~ first and second phases ~~phase~~ to the first and the second outphased signals according to a phase of an envelope signal.
9. (Original) The method of claim 8, further comprising:  
generating the envelope signal according to a phase of an input signal;  
generating the first and the second control signals according to an adaptive function determined, at least in part, on an instantaneous amplitude of the input signal; and  
combining the first and the second outphased signals to provide an output signal at an average power level that is substantially equivalent to a targeted power level.

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10. (Original) The method of claim 9, wherein generating the first and the second control signal comprises:
  - manipulating the instantaneous amplitude of the input signal with the targeted power level, wherein the targeted power level is selected from first and second power levels.
11. (Currently Amended) The method of claim 10, comprising:
  - varying amplitudes of the first and the second outphased signals at a first range of the instantaneous amplitude; and
  - varying the phase difference of between the first and the second outphased signals at a second range of the instantaneous amplitude.
12. (Currently Amended) A method comprising:
  - generating first and second control signals to control an amplitude of an output signal by varying, either a phase difference between first and second outphasing signals or an amplitude of the first and the second outphased signals and according to properties of an adaptive function determined, at least in part, by an instantaneous amplitude of a predistorted signal; ~~and~~
  - ~~varying a phase difference and an amplitude of the first and the second outphased signals according to the first and the second control signals.~~
13. (Currently Amended) The method of claim 12, further comprising:
  - generating an envelope signal according to a phase of the predistorted signal;
  - and
  - varying ~~[[a]]~~ first and second phases phase of the first and the second outphased signals, respectively, according to the envelope signal.
14. (Currently Amended) The method of claim 12, further comprising~~[[;]]~~:

combining the first and the second outphased signals to provide an output signal at an average power level which is substantially equivalent to a targeted power level; and

generating the predistorted signal to compensate for distortion at the output signal.

15. (Original) The method of claim 14, wherein generating the first and the second control signal comprises:

manipulating the instantaneous amplitude of the input signal with the targeted power level, wherein the targeted power level is selected from first and second power levels.

16. (Currently Amended) An apparatus comprising:

a coupler to provide a feedback signal of an output signal to a phase lock loop and an automatic level control loop;

an outphased signal generator and a power amplifier that are shared by the phase lock loop and the automatic level control loop wherein, a non shared portion of the automatic level control loop is able to provide the outphased signal generator first and second control signals which are, in combination, able to vary either, a phase difference between first and second outphased signals or an amplitude of the first and second outphased signals; and

a dipole antenna to transmit the output signal according to a targeted power level.

17. (Original) The apparatus of claim 16, wherein the phase lock loop further comprises:

a phase error detector which is adapted to provide a phase error signal according to an input signal and the output signal; and

a signal generator to generate a envelope signal according to the phase error signal.

18. (Original) The apparatus of claim 17, wherein the automatic level control loop

comprises:

an amplitude error detector to provide an amplitude error signal according to the input signal and the output signal; and

a control signal generator to generate first and second control signals according to the amplitude error signal, wherein the first control signal is determined, at least in part, by the amplitude error signal and the second control signal is determined, at least in part, by an adaptive function of the amplitude error signal.

19. (Currently Amended) The apparatus of claim 18, wherein the first and second control signal signals are adapted to vary amplitudes of the first and the second outphased signals at a first range of the amplitude error signal and to vary an amplitude of the output signal by varying a phase difference of between the first and the second outphased signals at a second range of the amplitude error signal.

20. (Original) The apparatus of claim 16, wherein the power amplifier further comprises:  
first and second power amplifiers which are adapted to amplify the first and the second outphased signals; and  
a combiner which is adapted to combine the first and the second amplified outphased signals.

21. (Currently Amended) The apparatus of claim 20, wherein the targeted power level is to be selected from first and second power levels.

22. (Currently Amended) An apparatus comprising:  
a control signal generator to generate first and second control signals to vary, either an amplitude of first and second outphased signals or a phase difference between the first and second control signals according to an adaptive function determined, at least in part, by an instantaneous amplitude of an input signal; and

an outphasing signal generator to generate first and second outphased signals according to the first and the second control signals and a constant envelope signal.

23. (Original) The apparatus of claim 22, further comprising:  
a power amplifier to provide an output signal according to the first and the second outphased signals and to transmit the output signal at an average power level which is substantially equivalent to a targeted power level.
24. (Currently Amended) The apparatus of claim 23, wherein the first and the second control signals are adapted, in combination, to vary amplitudes of the first and the second outphased signals at a first range of the instantaneous amplitude and to vary a phase difference of between the first and the second outphased signals at a second range of the instantaneous amplitude.
25. (Original) The apparatus of claim 24, wherein the control signal generator is further adapted to manipulate the instantaneous amplitude of the input signal with the targeted power level, wherein the targeted power level is selected from first and second power levels.
26. (Currently Amended) An apparatus comprising:  
a signal generator ~~which is adapted~~ to generate an envelope signal according to a phase of a baseband signal; and  
a control signal generator to generate first and second control signals to vary either an amplitude of first and second outphased signals or a phase difference between the first and second control signals according to an adaptive function determined, at least in part, by an instantaneous amplitude of a baseband signal.
27. (Original) The apparatus of claim 26 further comprising:

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an outphasing signal generator to generate the first and the second outphased signals according to the first and the second control signals and according to the envelope signal, wherein the first and the second outphased signals comprise a phase which is provided by the envelope signal, a variable phase difference and a variable amplitude which varies according to the first and the second control signals.

28. (Original) The apparatus of claim 27 further comprising:

a power amplifier which is adapted to provide an output signal according to the first and the second outphased signals at an average power level which is substantially equivalent to a targeted power level.

29. (Original) The apparatus of claim 28, wherein the control signal generator is further adapted to manipulate the instantaneous amplitude of the input signal with the targeted power level, wherein the targeted power level is selected from first and second power levels.